5. The Harrod-Domar model

**5.1** In light of the Harrod-Domar model, discuss the main measures that governments should take to promote economic growth.

**5.2** Consider the following data for three economies which behave in accordance with the hypotheses of the Harrod-Domar model:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Investment rate | Depreciation rate | Physical capital productivity | Warranted growth rate |
| Economy A | 35% | 4% | 0.2 |  |
| Economy B | 28% |  | 0.25 | 2% |
| Economy C | 30% | 2.5% |  | 5% |

Fill in the blank cells in the table.

**5.3** The government of country A set as its goal, for the period 2023-2027, for the average annual growth rate of labour productivity to be 2.5%. The Statistics Office forecast an average annual growth rate of the labour force of 1.5% for this period, and estimated, also for this period, a capital-output ratio equal to 3 and a depreciation rate of 4%. Assuming the hypotheses of the Harrod-Domar model, make use of it to say what should be, in such conditions, the savings rate of this economy.

**5.4** Suppose an economy which functions in accordance with the hypotheses of the Harrod-Domar model, growing at its warranted growth rate, and in which total income (Y) increased from 128 billion euros in 2005 to 180 billion euros in 2020. Over the same period, the savings rate was 20% and the depreciation rate was 4%.

a) Estimate the value of the capital stock in 2020.

b) If the capital-output ratio had been larger, with all else constant, would the economy have grown faster or slower? Explain why that is the case.

**5.5** With regard to an economy which behaves in accordance with the hypotheses of the Harrod-Domar model and which has been growing at its warranted growth rate, the following information is known for the period 2017-2022:

- The value of the physical capital stock increased from 600 million monetary units to 730 million monetary units

- The savings rate, which remained constant throughout the period, was 32%

- The capital-output ratio, which also remained constant throughout the period, was equal to 4.

Based on the information provided, indicate:

a) the output of this economy in 2017 and in 2022;

b) the depreciation rate (assuming that this rate also remained constant throughout the period 2013-2018).

**5.6** Comment on the following statement and correct it if necessary: “Capital accumulation is the engine of economic growth in the Harrod-Domar model because in this model physical capital is characterised by increasing marginal productivity".